QC ABSTRACT

NAME OF WORK: Improvements and Balance Works to Ambedkar Bhavana in Ward No.04 of Yelahanka Satellite Town Sub Division

Sl.No	Item Of Work	Name of Test	Frequency of Test/Quantity	Executed Quantity	Number of Tests Required	Number of Tests Conducted
		Materials				
1	Cement	Fineness by dry sieving	One Test		1	1
		Finess by Air permeablity method	One Test		1	1
		Density	One Test		1	1
		Standard Consistency	One Test		1	1
		Initial Setting time	One Test		1	1
		Final Setting time	One Test		1	1
		Soundness (Le Chatelier's Method)	One Test		1	1
		Compressive Strength	One Test		1	1
2	Course aggregate(40 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
3	Course aggregate(20 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
		Aggregate crushing Value	One Test		1	1
		Aggregate Impact Value	One Test		1	1
4	Fine aggregate	SIEVE ANALYSIS	One Test		1	1
		Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
5	PCC(M20)	Compressive Strength(7days and 28days)	1 set /1-5 cum	2.7	2	2
6	PCC For Hump (M20)	Compressive Strength(7days and 28days)	1 set /1-5 cum	1.08	2	2
7	PCC For Pole (M20)	Compressive Strength(7days and 28days)	1 set /1-5 cum	0.19	2	2
8	PCC For Basement (M20)	Compressive Strength(7days and 28days)	5 set /51-100 cum	69.18	10	10
9	Mortar Sand	Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
		Compacted Bulk Density	One Test		1	1
		Loose Bulk Density	One Test		1	1
		SIEVE ANALYSIS	One Test		1	1
10	Plaster Sand	Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
		SIEVE ANALYSIS	One Test		1	1

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID : **CP-2020-02-29-106** **Date: 11-11-19**

Project Name : Improvements and Balance Works to Ambedkar Bhavana in Ward No.04 of Yelahanka Satellite Town Sub Division

Agency : Executive Engineer KRIDL Bangalore

Customer's Reference : EE(Project)/Ynk Zone/WO/70/2019-20

Date of Receipt : 07-11-19

Sample Type : Birla Super 53grade

Reference to BIS codes : IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification ,
IS 4031 (Part 1,2 3,4,5, 6,11):1988
IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4
IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5
IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6
IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5
IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5
IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6

Date of test : 08-11-19

Environmental Conditions during test : Temperature: 26°C
Humidity: 72%

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	2.1	–
2	Finess by Air permeablity method (m^2/kg,Min)	284.5	225m^2/kg, Min
3	Density (gm/cc)	3.13	–
4	Standard Consistency (%)	28%	Not specified
5	Initial Setting time	155 minutes	Not less than 30 minutes
6	Final Setting time	260 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	2mm	Not more than 10 mm

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2020-02-29-106** **Date: 06-12-19**
Project Name	:	Improvements and Balance Works to Ambedkar Bhavana in Ward No.04 of Yelahanka Satellite Town Sub Division
Agency	:	Executive Engineer KRIDL Bangalore
Customer's Reference	:	EE(Project)/Ynk Zone/WO/70/2019-20
Date of Receipt	:	07-11-19
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, Determination of Compressive Strength, Clause 6
Date of test	:	08-11-19
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Compressive Strength

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	3 Days	28.5N/mm^2	Not less than 27 N/mm^2
2	7 Days	39.0N/mm^2	Not less than 37 N/mm^2
3	28 Days	58.5N/mm^2	Not less than 53 N/mm^2

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

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M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2020-02-29-106** **Date: 11-11-19**
Project Name	:	Improvements and Balance Works to Ambedkar Bhavana in Ward No.04 of Yelahanka Satellite Town Sub Division
Agency	:	Executive Engineer KRIDL Bangalore
Customer's Reference	:	EE(Project)/Ynk Zone/WO/70/2019-20
Date of Receipt	:	07-11-19
Sample Type	:	40mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	07-11-19

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : **15000 grams**

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	244	244	1.6	98.4	90-100
3	20 mm	5432	5676	37.8	62.2	30-70
4	10 mm	4332	10008	66.7	33.3	10-35
5	4.75 mm	4654	14662	97.7	2.3	0-5
6	Pan	338	15000	100.0	0	---

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M: 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

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TEST REPORT ON COARSE AGGREGATES

: CP-2020-02-29-106 **Date: 11-11-19**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	12.4	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	11.8	
3	Specific Gravity	2.68	_
4	Bulk Density(Loose) (Kg/l)	1.48	_
5	Bulk Density(Compacted) (Kg/l)	1.52	_
6	Water Absorption(%)	0.22	_

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R.KARTHIK RECHAN
Authorized Signatory
Quality Manager

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2020-02-29-106** **Date: 09-11-19**
Project Name	:	Improvements and Balance Works to Ambedkar Bhavana in Ward No.04 of Yelahanka Satellite Town Sub Division
Agency	:	Executive Engineer KRIDL Bangalore
Customer Reference	:	EE(Project)/Ynk Zone/WO/70/2019-20
Date of Receipt	:	07-11-19
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	07-11-19

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	245	245	4.9	95.1	90-100
3	10 mm	2560	2805	56.1	43.9	25-55
4	4.75 mm	2033	4838	96.8	3.2	0-10
5	Pan	162	5000	100	0	–

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TEST REPORT ON COARSE AGGREGATES

Lab ID : CP-2020-02-29-106 Date: 09-11-19

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	13.2	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	12.6	
3	Specific Gravity	2.66	–
4	Bulk Density(Loose) (Kg/l)	1.54	–
5	Bulk Density(Compacted) (Kg/l)	1.58	–
6	Water Absorption(%)	0.22	–
7	Aggregate crushing Value(%)	24.5	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	22.8	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

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TEST REPORT OF FINE AGGREGATE

: CP-2020-02-29-106 **Date: 09-11-19**

: Improvements and Balance Works to Ambedkar Bhavana in Ward No.04 of Yelahanka Satellite Town Sub Division

: Executive Engineer KRIDL Bangalore

: EE(Project)/Ynk Zone/WO/70/2019-20

: 07-11-19

: Fine Aggregate

: IS 383 : 2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1, 3) RA2012
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption

: 07-11-19

: 1000 grams

Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
					Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
10mm	0	0	0.0	100.0	100	100	100	100
4.75mm	27	27	2.7	97.3	90-100	90-100	90-100	95-100
2.36mm	55	82	8.2	91.8	60-95	75-100	85-100	95-100
1.18mm	239	321	32.1	67.9	30-70	55-90	75-100	90-100
600micron	205	526	52.6	47.4	15-34	35-59	60-79	80-100
300micron	203	729	72.9	27.1	5-20	8-30	12-40	15-50
150micron	191	920	92.0	8.0	0-10	0-10	0-10	0-15
Pan	80	1000	100.0	0.0	---	---	---	---

The tested Sample Conforms to Grading Zone II

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Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

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TEST REPORT OF FINE AGGREGATE

Lab ID : CP-2020-02-29-106 Date: 09-11-19

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	1.5	–
2	Specific Gravity	2.59	–
3	Material finer than 75 micron(%)	6.9	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

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TEST REPORT OF CEMENT CONCRETE CUBES

	:	**CP-2020-02-29-106** **Date: 22/11/2019**
Name	:	Improvements and Balance Works to Ambedkar Bhavana in Ward No.04 of Yelahanka Satellite Town Sub Division
	:	Executive Engineer KRIDL Bangalore
ner's Reference	:	EE(Project)/Ynk Zone/WO/70/2019-20
Receipt	:	18-11-19
ner ID	:	PCC
Type /Size	:	150X150X150 mm
grade/Age	:	M20 / 7 Days Compressive Strength
ne to BIS codes	:	IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5
Test	:	22/11/2019

Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
PCC	M20	15/11/2019	22/11/2019	149.36 X 150.37 X 151.98	22459	**8.225**	414.9	18.5	18.2
PCC	M20	15/11/2019	22/11/2019	150.95 X 151.78 X 151.06	22912	**8.873**	415.6	18.1	
PCC	M20	15/11/2019	22/11/2019	150.51 X 149.04 X 149.20	22432	**8.171**	404.8	18.0	

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TEST REPORT OF CEMENT CONCRETE CUBES

: **CP-2020-02-29-106** **Date: 13/12/2019**

: Improvements and Balance Works to Ambedkar Bhavana in Ward No.04 of Yelahanka Satellite Town Sub Division

: Executive Engineer KRIDL Bangalore

: EE(Project)/Ynk Zone/WO/70/2019-20

: 18-11-19

: PCC

: 150X150X150 mm

: M20 / 28 Days Compressive Strength

: IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

: 13/12/2019

Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
PCC	M20	15/11/2019	13/12/2019	150.38 X 150.42 X 149.48	22620	**8.940**	526.6	23.3	23.0
PCC	M20	15/11/2019	13/12/2019	151.38 X 151.60 X 149.77	22950	**8.485**	508.1	22.1	
PCC	M20	15/11/2019	13/12/2019	149.13 X 149.92 X 150.87	22356	**8.773**	529.2	23.7	

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TEST REPORT OF CEMENT CONCRETE CUBES

: CP-2020-02-29-106 **Date: 26/11/2019**

: Improvements and Balance Works to Ambedkar Bhavana in Ward No.04 of Yelahanka Satellite Town Sub Division

: Executive Engineer KRIDL Bangalore

: EE(Project)/Ynk Zone/WO/70/2019-20

: 21-11-19

: PCC for Hump

: 150X150X150 mm

: M20 / 7 Days Compressive Strength

: IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

: 26/11/2019

Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
PCC for Hump	M20	19/11/2019	26/11/2019	149.85 X 151.02 X 149.08	22631	**8.225**	427.0	18.9	18.5
PCC for Hump	M20	19/11/2019	26/11/2019	151.35 X 151.15 X 151.41	22876	**8.873**	421.0	18.4	
PCC for Hump	M20	19/11/2019	26/11/2019	149.38 X 150.22 X 149.67	22440	**8.171**	408.0	18.2	

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Authorized Signator
Quality Manage

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2924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

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TEST REPORT OF CEMENT CONCRETE CUBES

: **CP-2020-02-29-106** **Date: 17/12/2019**

: Improvements and Balance Works to Ambedkar Bhavana in Ward No.04 of Yelahanka Satellite Town Sub Division

: Executive Engineer KRIDL Bangalore

: EE(Project)/Ynk Zone/WO/70/2019-20

: 21-11-19

: PCC for Hump

: 150X150X150 mm

: M20 / 28 Days Compressive Strength

: IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

: 17/12/2019

Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
PCC for Hump	M20	19/11/2019	17/12/2019	150.56 X 150.40 X 151.19	22643	**8.940**	542.2	23.9	23.3
PCC for Hump	M20	19/11/2019	17/12/2019	149.98 X 151.31 X 151.47	22693	**8.485**	499.8	22.0	
PCC for Hump	M20	19/11/2019	17/12/2019	150.14 X 150.77 X 151.85	22637	**8.773**	539.6	23.8	

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

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9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

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TEST REPORT OF CEMENT CONCRETE CUBES

: **CP-2020-02-29-106** **Date: 30/11/2019**

: Improvements and Balance Works to Ambedkar Bhavana in Ward No.04 of Yelahanka Satellite Town Sub Division

: Executive Engineer KRIDL Bangalore

: EE(Project)/Ynk Zone/WO/70/2019-20

: 25-11-19

: PCC for Pole

: 150X150X150 mm

: M20 / 7 Days Compressive Strength

: IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

: 30/11/2019

Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
PCC for Pole	M20	23/11/2019	30/11/2019	150.93 X 150.84 X 151.69	22766	**8.225**	416.3	18.3	18.4
PCC for Pole	M20	23/11/2019	30/11/2019	150.30 X 151.44 X 149.04	22762	**8.873**	423.7	18.6	
PCC for Pole	M20	23/11/2019	30/11/2019	150.92 X 150.33 X 151.72	22689	**8.171**	413.7	18.2	

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TEST REPORT OF CEMENT CONCRETE CUBES

: CP-2020-02-29-106

Date: 21/12/2019

: Improvements and Balance Works to Ambedkar Bhavana in Ward No.04 of Yelahanka Satellite Town Sub Division

: Executive Engineer KRIDL Bangalore

: EE(Project)/Ynk Zone/WO/70/2019-20

: 25-11-19

: PCC for Pole

: 150X150X150 mm

: M20 / 28 Days Compressive Strength

: IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

: 21/12/2019

Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
				(mm)	(Sq.mm)	(kg)	(KN)	(N/mm^2)	(N/mm^2)
PCC for Pole	M20	23/11/2019	21/12/2019	150.27 X 149.77 X 151.92	22506	**8.940**	539.9	24.0	23.4
PCC for Pole	M20	23/11/2019	21/12/2019	150.99 X 149.14 X 149.30	22517	**8.485**	500.8	22.2	
PCC for Pole	M20	23/11/2019	21/12/2019	149.09 X 151.60 X 151.66	22602	**8.773**	539.2	23.9	

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